

# **Pharmacy Enterprise Customization System (PECS)**

## **PECS Java version 6.2**

### **Deployment, Installation, Back-Out, and Rollback Guide (DIBR)**



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## Revision History

Date	Version	Description	Author
07/01/2021	1.0	PREC*6.2*1: <ul style="list-style-type: none"><li>• Updated Log4j, WebLogic, Hibernate, and Spring Framework software versions in the <b>Purpose</b> section, to be compliant via the Technical Reference Model per the VA Security Standards</li><li>• See the non-redacted prec_6_2_p1_dibr on the SOFTWARE library for the script and file location</li></ul>	Liberty ITS

## Artifact Rationale

This document describes the Deployment, Installation, Back-out, and Rollback Guide for the PECS Java portion of the PECS v6.2 release. This is a subdocument of the main PECS Deployment, Installation, Back-Out, and Rollback Guide. It is separate since many of the details of PECS Java application deployment involve a different set of personnel coordinating at just a few critical collaboration points with the VistA/MUMPS portion. Those collaboration points will be highlighted and cross-referenced in the main document as well as in this document.

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# 1 Introduction

This document describes how to deploy and install the Pharmacy Enterprise Customization System (PECS) Java Application, including the WebLogic, Oracle, and SSOi configurations for PECS v6.2.

## 1.1 Purpose

The purpose of this document is to describe how to deploy and install the PECS Java Application, including the WebLogic, Oracle, and SSOi configurations. PREC\*6.2\*1 is a patch that upgrades no longer compliant software versions to be compliant as recognized by the Technical Reference Model (TRM). The software and versions are listed below:

- WebLogic 12.1.3
- Spring 4.2.9
- Hibernate 5.1.1
- Log4j-api 2.10.0

## 1.2 Dependencies

The following pre-existing PECS v6.2 interfacing systems must be available during the deployment.

- SSOi
- ISAAC
- STS/VETS

## 1.3 Constraints

There are no constraints for the PECS v6.2 release.

## 2 Roles and Responsibilities

Table 1: Deployment, Installation, Back-out, and Rollback Roles and Responsibilities

ID	Team	Phase / Role	Tasks	Project Phase (See Schedule)
	Austin Information Technology Center (AITC)	Deployment	Plan and schedule deployment (including orchestration with vendors)	
	AITC	Deployment	Determine and document the roles and responsibilities of those involved in the deployment.	
	AITC	Deployment	Test for operational readiness	
	AITC	Deployment	Execute deployment	
	PECS Sustainment Team	Back-out	Confirm availability of back-out instructions and back-out strategy (what are the criteria that trigger a back-out)	
	Product Support	Post Deployment	Hardware, Software, and System Support	

## 3 Deployment

This section provides the schedule and milestones for the deployment.

### 3.1 Timeline

The PECS v6.2 Java Application will be nationally deployed at AITC after IOC testing and National Release approval.

### 3.2 Site Readiness Assessment

The PECS Java Application is a single, nationally deployed, web application deployed in the AITC.

#### 3.2.1 Deployment Topology (Targeted Architecture)

The PECS Java Application and Database will be installed on the existing PECS v6.2 production platform.

#### 3.2.2 Site Information (Locations, Deployment Recipients)

Section 3.2 describes the PECS Java Application and it is deployed in AITC as a national web application.

### 3.2.3 Site Preparation

The following table describes preparation required by the site prior to deployment.

**Table 2: Site Preparation**

Site/Other	Problem/Change Needed	Features to Adapt/Modify to New Product	Actions/Steps	Owner
AITC	Ensure Firewall access between PECS and ISAAC		If connectivity is not open between the PECS web application server and the ISAAC server, request that the firewall be opened for this connection	
AITC	Ensure Firewall access between PECS and STS/VETS		If connectivity is not open between the PECS web application server and the STS/VETS server, request that the firewall be opened for this connection	

### 3.3 Resources

The pre-existing PECS v6.2 environment resources will be used.

#### 3.3.1 Facility Specifics

The following table lists facility-specific features required for deployment.

**Table 3: Facility-Specific Features**

Site	Space/Room	Features Needed	Other
N/A			

### 3.3.2 Hardware

The following table describes hardware specifications required at each site prior to deployment.

**Table 4: Hardware Specifications**

Required Hardware	Model	Version	Configuration	Manufacturer	Other
N/A					

Please see the Roles and Responsibilities table in Section 2 for details about who is responsible for preparing the site to meet these hardware specifications.

### 3.3.3 Software

The following table describes software specifications required at each site prior to deployment.

**Table 5: Software Specifications**

Required Software	Version	Configuration
Oracle WebLogic	12.1.3	Pre-existing
Oracle 11g Enterprise Edition Release	11.2.0.2.0	Pre-existing
Apache httpd	Apache/2.2.15 (Unix)	Pre-existing
Red Hat Enterprise Linux Server	6.9 (Santiago)	Pre-existing
Java SDK	1.8_162 or higher	Pre-existing

Please see the Roles and Responsibilities table in Section 2 above for details about who is responsible for preparing the site to meet these software specifications.

### 3.3.4 Communications

- Notify business owner of production deployment
- The Release Manager will schedule activities and identify the required personnel for each activity.
- Meetings will be scheduled for deployment personnel to work through the deployment steps.

### 3.3.4.1 Deployment/Installation/Back-Out Checklist

Table 6: Deployment/Installation/Back-Out Checklist

Activity	Day	Time	Individual who completed task
Deploy	N/A	N/A	N/A
Install	N/A	N/A	N/A
Back-Out	N/A	N/A	N/A

## 4 Installation

### 4.1 Pre-installation and System Requirements

The PECS Java Application and Database will be installed on the existing PECS v6.2 production platform.

### 4.2 Platform Installation and Preparation

The pre-existing PECS v6.2 platform will be used.

### 4.3 Download and Extract Files

See Section 4.5, specific filenames will be detailed in the RFC.

### 4.4 Database Creation

The pre-existing PECS v6.2 database will be used.

### 4.5 Installation Scripts

All scripts and files are in the following location.

**REDACTED**

The installer should follow the instructions in the appropriate RFC documents for the target environment.

### 4.6 Cron Scripts

No Cron job changes are required for this deployment.

## 4.7 Access Requirements and Skills Needed for the Installation

Linux System Administrator will need:

- Access to the Linux console of the server where PECS's WebLogic is running
- Access to the WebLogic web-based Console
- Access to the location indicated in section 4.5 Installation Scripts

Database Administrator will need:

- Access to the Linux console of the server where PECS's Oracle Database is running
- Access to the location indicated in section 4.5 Installation Scripts

## 4.8 Installation Procedure

This section is a high-level overview of the installation procedure steps. Detailed steps are in the RFC for database and application deployment, and they will be published at the locations in Section 4.5.

1. Stop the Managed Server
2. Un-deploy the two EAR files for PECS v6.2 Application
3. Deploy the two new EAR files for PECS v6.2 Application
4. Start the PECS Application
5. Perform Smoke Test on PECS

## 4.9 Installation Verification Procedure

After the deployment is updated, PECS will be smoke tested.

The system administrator will check application logs for the absence of errors.

## 4.10 System Configuration

### 4.10.1 Properties Files

No property file changes are required for this deployment. The pre-existing PECS v6.2 property files will be used.

### 4.10.2 Import VA Certificates

No certificate changes are required for this deployment. The pre-existing PECS v6.2 VA certificates will be used.

## 4.11 Database Tuning

After installation, the AITC database administrator should monitor the Oracle Enterprise Manager/Cloud Control to note any performance problems.

## **5 Back-Out Procedure**

### **5.1 Back-Out Strategy**

The back-out strategy for the PECS Java application is to restore the previous PECS v6.2 EAR file.

### **5.2 Back-Out Considerations**

#### **5.2.1 Load Testing**

N/A

#### **5.2.2 User Acceptance Testing**

User Acceptance Testing is performed at test sites during IOC Testing.

### **5.3 Back-Out Criteria**

A back-out should only be considered if it is determined that the PECS v6.2 application is the cause of a patient safety issue or catastrophic system failure.

### **5.4 Back-Out Risks**

Risks of backing out include not reconfiguring the application in the same manner it was before the start of the implementation. This can be remediated by taking backups of the appropriate file systems and database before starting the deployment.

### **5.5 Authority for Back-Out**

The PECS Sustainment PM has the authority to determine if a back-out of PECS v6.2 is required.

### **5.6 Back-Out Procedure**

Deploy the previous PECS v6.2 application EAR file in WebLogic.

### **5.7 Back-out Verification Procedure**

A smoke test will be performed to determine that the application is working properly.

## **6 Rollback Procedure**

See Section 5 for rollback procedures.